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AFOSR-TR-87-2038 AFOSR-86-0227

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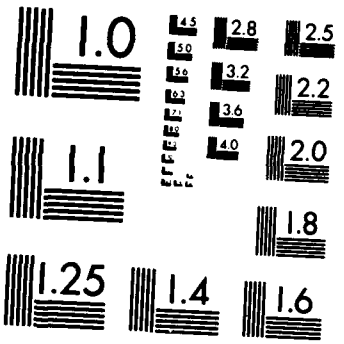

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SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION	1b RESTRICTIVE MARKINGS DTIC FILE COPY
2a. SECURITY CLASSIFICATION AUTHORITY	3 DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release; distribution unlimited.
CHEDULE	
JUMBER(S)	5 MONITORING ORGANIZATION REPORT NUMBER(S) AFOSR-TR- 87-2038

AD-A188 498

6a. NAME OF PERFORMING ORGANIZATION: Massachusetts Inst of Tec	6b. OFFICE SYMBOL (If applicable):	7a NAME OF MONITORING ORGANIZATION: AFOSR/NM
6c. ADDRESS (City, State, and ZIP Code): Cambridge, MA		7b ADDRESS (City, State, and ZIP Code): Bldg 410 Bolling AFB, DC 20332
8a. NAME OF FUNDING / SPONSORING ORGANIZATION: AFOSR	8b. OFFICE SYMBOL (If applicable): NM	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER: AFOSR-86-0227
8c. ADDRESS (City, State, and ZIP Code): Bldg 410 Bolling AFB, DC 20332		10. SOURCE OF FUNDING NUMBERS

PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO
61102F	2917	A5	

11. TITLE (Include Security Classification)

Support for Concurrent Computing Environments

12. PERSONAL AUTHOR(S)
Virginia Klema

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT
Final	FROM 8/15/86 TO 8/15/87	87/10/07	1

16. SUPPLEMENTARY NOTATION

17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB-GROUP	

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

This ~~grnat~~ grant, under the URIP program, provided instrumentation equipment used to ~~enhnace~~ enhance research in concurrent computing. The equipment provided a network of concurrent computing machines. (Keywords: numerical algorithms, computational

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20. DISTRIBUTION / AVAILABILITY OF ABSTRACT	21. ABSTRACT SECURITY CLASSIFICATION
☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT. ☐ DTIC USERS	Unclassified

22a. NAME OF RESPONSIBLE INDIVIDUAL	22b. TELEPHONE (Include Area Code)	22c. OFFICE SYMBOL
John Thomas, Maj, USAF	(202) 767-5025	AFOSR/NM

DD FORM 1473, 84 MAR 83 APR edition may be used until exhausted. All other editions are obsolete.

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UNCLASSIFIED

AFOSR-TR- 87-2038

FINAL
~~PROGRESS~~ REPORT

October 7, 1987

"Support for Concurrent Computing Environments,"
University Research Instrumentation, AFOSR-86-0227,
Virginia Klema, Principal Investigator, MIT Concurrent Computing Group.

The instrumentation equipment provided by AFOSR-86-0227 is used primarily to enhance research supported by Air Force Grant 82-0210E, "Concurrent Computing: Numerical Algorithms and Some Applications," Principal Investigator, Virginia Klema. The equipment listed below fostered collaborative research with the faculty, research staff, and graduate students in the Computational Fluid Dynamics Laboratory at MIT, directed by Professor Earll Murman.

In particular, the equipment procured provides a networked set of concurrent computing machines, graphics and desk publishing capability, access to the MIT campus-wide network, and immediate host access to the ARPAnet. The Sun 3/260C is the hub of the networked machines and furthermore provides a front engine for the BBN Butterfly Development System (on loan from BBN) and remote login capability for the Intel cube.

In addition to the Sun 3/260C, the equipment obtained through this instrumentation grant includes

2 Sun 3/50 diskless nodes,

an Imagen 2803 laser printer,

Sun 280 MB disk,

Sun ethernet board with Vme-MB adapter,

Intel network hardware with software,

Intel system 310/140 (an upgrade for the host for the Intel cube),

networking supplies and cables to permit network installation.

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We gratefully acknowledge our appreciation for this support for our research on numerical algorithms for scientific computation on concurrent computing systems. These systems presently include the 32 node Intel hypercube and the BBN Butterfly development system.

Collaborative research with the MIT Computational Fluid Dynamics Laboratgory provides a rich set of research problems that include models for aircraft design, graphics applications, matrix computations, and the solution of partial differential equations with special structure. The Computational Fluid Dynamics Laboratory has a number of MicroVAX II workstations and an FX/ Alliant concurrent system.

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MARCH, 1988

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